

## WAVELENGTH MONITOR FOR WDM SYSTEMS

### ABSTRACT OF THE DISCLOSURE

A method of monitoring input light having a plurality of spectral bands (wavelength channels) includes the following, carried out for at least two different spectral bands at different times, using a common photodetector and wavelength-monitoring circuit that is coupled to the photodetector: separating one of the spectral bands from the plurality of spectral bands, directing light in only that spectral band to the photodetector, and generating, with the wavelength-monitoring circuit, a signal representing a quality characteristic of a modulated or unmodulated pattern of light in that spectral band. Each of the plurality of spectral bands can be individually and sequentially monitored in round-robin fashion, each of a subset of the spectral bands can be individually and sequentially monitored in round-robin fashion (to provide selective wavelength monitoring), or the monitoring can be ad hoc in response to external requirements. If desired, the optical power of the plurality of spectral bands can be monitored by directing the light in the spectral bands other than the band that has been separated from the plurality to an additional common photodetector and a common power-monitoring circuit.

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